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FIG. 12 is a cross-sectional view illustrating another exemplary embodiment of a display device in accordance with still another embodiment of the present invention, and FIG. 13 is an enlarged plan view illustrating a portion of the exemplary embodiment of a display device of FIG. 12. The exemplary embodiment of a display device of FIGS. 12 and 13 is substantially the same as the exemplary embodiment of a display device of FIG. 11 except supporting spacers 340. Thus, the same reference numerals will be used to refer to the same or like parts as those described in FIG. 11 and any further repetitive explanation concerning the above elements will be omitted.

Referring to FIGS. 12 and 13, a density of the supporting spacers 340 increases with proximity to a center of the touch screen panel.

In the present exemplary embodiment, each of pixel electrodes 112 substantially adjacent to the center of the touch screen panel corresponds to two supporting spacers 341 and 342. In FIGS. 12 and 13, a first supporting spacer 341 corresponds to a TFT formation location, and a second supporting spacer 342 corresponds to a region between adjacent pixel electrodes 112. For example, the second supporting spacer 342 is in a region in which a gate line 111 crosses a first sensing line 161. Alternative exemplary embodiments include configurations wherein more than three supporting spacers may be formed on each pixel.

Each of the pixel electrodes 112 substantially adjacent to the periphery of the touch screen panel corresponds to a third supporting spacer 343 of the supporting spacers 340.

According to the present exemplary embodiment, the density of the supporting spacers 340 is adjusted so that the lower substrate 100 has substantially a same bending amount as the upper substrate 120. Also, a density of the supporting spacers 341 and 342 substantially adjacent to the center of the touch screen panel is greater than that of FIG. 11, so that the uniformity of the touching sensitivity of the touch screen panel is increased when the amount of the externally provided pressure is increased.

FIG. 14 is a cross-sectional view illustrating another exemplary embodiment of a display device in accordance with the present invention. The exemplary embodiment of a display device of FIG. 14 is substantially the same as the exemplary embodiment of a display device of FIG. 11 except supporting spacers 440. Thus, the same reference numerals will be used to refer to the same or like parts as those described in FIG. 11 and any further repetitive explanation concerning the above elements will be omitted.

Referring to FIG. 14, the size of the supporting spacers 440 is increased with proximity to a center of the touch screen panel. For example, a width w3 of the supporting spacers 441 substantially adjacent to the center of the touch screen panel is greater than a width w4 of the supporting spacers 442 substantially adjacent to the periphery of the touch screen panel, so that the mechanical strength of a central portion of the touch screen panel is greater than that of a peripheral portion of the touch screen panel. In one exemplary embodiment, the supporting spacers 440 may be formed through a photo process or a photolithography process.

Therefore, the upper substrate 120 has a same bending amount as the lower substrate 100, so that the distance between the upper and lower substrates 120 and 100 may be substantially constant.

According to the present exemplary embodiment, the size of the supporting spacers 440 is adjusted so that the lower substrate 100 has substantially the same bending amount as the upper substrate 120. Therefore, the uniformity of the touching sensitivity of the touch screen panel is increased.

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According to an exemplary embodiment of an upper substrate, an exemplary embodiment of a method of manufacturing the upper substrate and an exemplary embodiment of a display device having the upper substrate of the present invention, height of conductive spacers may be adjusted to compensate for differences between the bending amounts of the upper and lower substrates. Thus, uniformity of touching sensitivity of the touch screen panel is improved, and malfunction of sensors that sense externally provided pressure is decreased.

In addition, in another exemplary embodiment, density of the supporting spacers may be adjusted so that the lower substrate has substantially the same bending amount as the upper substrate. Furthermore, in such an exemplary embodiment, two supporting spacers may be disposed on each pixel substantially adjacent to a center of the touch screen panel, so that the uniformity of the touching sensitivity is improved although an amount of the externally provided pressure is increased.

Furthermore, in another exemplary embodiment, the size of the supporting spacers may be adjusted, so that the lower substrate has substantially the same bending amount as the upper substrate.

Alternatively, any combination of the above exemplary embodiments may be combined into a single apparatus.

Therefore, the uniformity of the touching sensitivity of the touch screen panel is increased, and the malfunction of the sensors is decreased.

This invention has been described with reference to the exemplary embodiments. It is evident, however, that many alternative modifications and variations will be apparent to those having skill in the art in light of the foregoing description. Accordingly, the present invention embraces all such alternative modifications and variations as fall within the spirit and scope of the appended claims.

What is claimed is:

1. An upper substrate for a touch screen panel, the upper substrate comprising:
  - an upper base substrate;
  - a plurality of conductive spacers disposed on the upper base substrate, a height of the conductive spacers substantially adjacent to a center of the upper base substrate being smaller than a height of the conductive spacers substantially adjacent to a periphery of the upper base substrate;
  - a common electrode disposed on the upper base substrate; and
  - a plurality of supporting spacers disposed between the conductive spacers on the common electrode, the supporting spacers having a height greater than the height of the conductive spacers.
2. The upper substrate of claim 1, wherein a width of the conductive spacers substantially adjacent to the periphery of the upper base substrate is greater than a width of the conductive spacers substantially adjacent to the center of the upper base substrate.
3. The upper substrate of claim 2, wherein the width and the height of the conductive spacers substantially adjacent to the periphery are about 15  $\mu\text{m}$  and about 4.5  $\mu\text{m}$ , respectively, and the width and the height of the conductive spacers substantially adjacent to the center are about 12  $\mu\text{m}$  and about 4.4  $\mu\text{m}$ , respectively.
4. The upper substrate of claim 3, wherein the height of the supporting spacers is about 4.6  $\mu\text{m}$ .